


HINTS  
FOR INVALIDS AND TRAVELLERS.



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# HINTS FOR INVALIDS AND TRAVELLERS

⑦

WITH OBSERVATIONS ON THE

CLIMATE OF LUXOR AND EGYPT

MADE DURING A THREE YEARS' RESIDENCE  
1877-78-79

BY

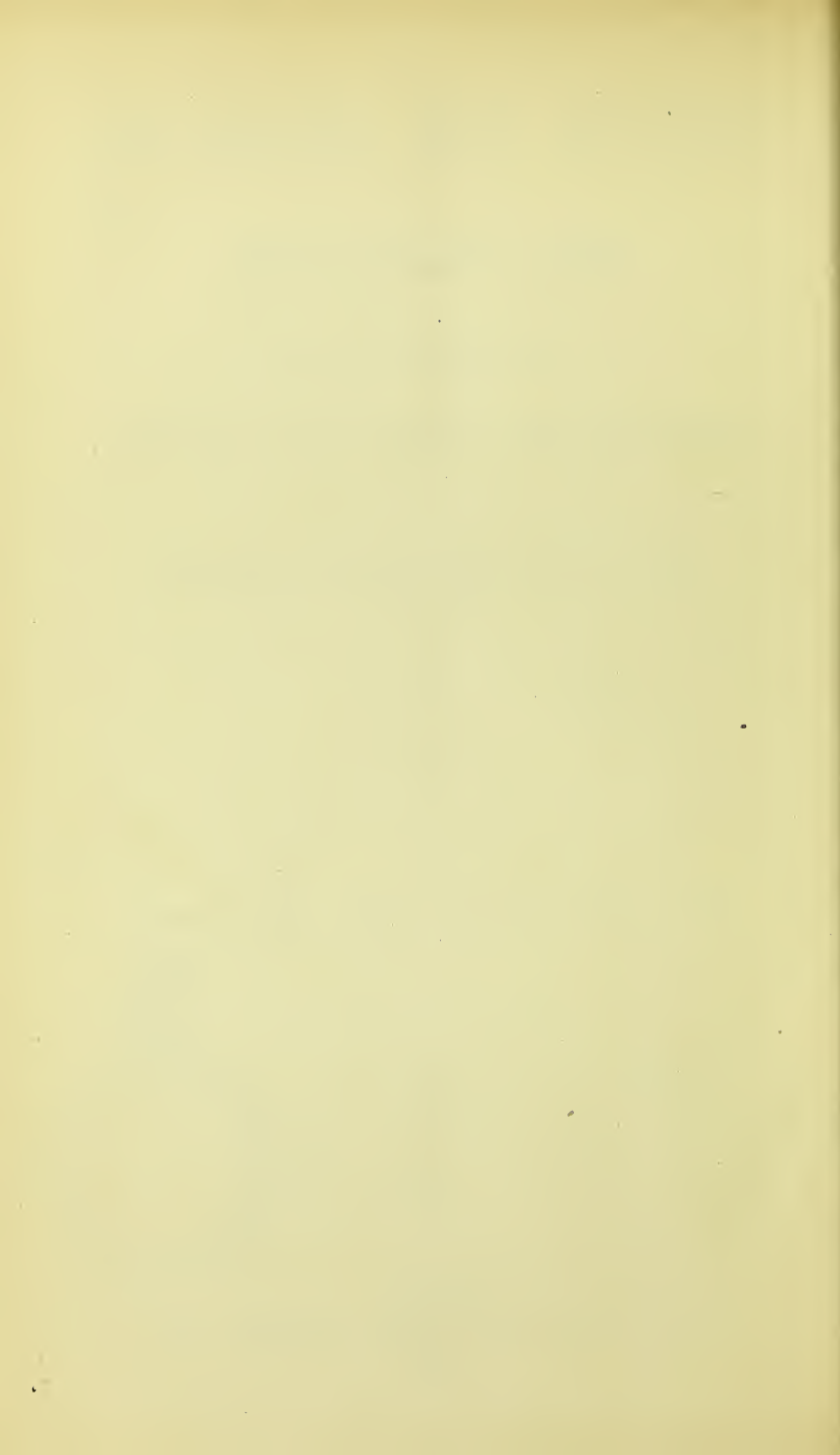
T. E. MACLEAN, M.B., B.S. LOND.



LONDON

H. K. LEWIS, 136 GOWER STREET, W.C.

1884



# HINTS FOR INVALIDS & TRAVELLERS,

## ON THE

### CLIMATE OF LUXOR AND EGYPT.

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DURING the present crisis, the eyes of all Englishmen are naturally turned towards the lands actually belonging to, or owing allegiance to Turkey. Amongst these lands we find one of considerable interest to the profession, namely Egypt, on account of its valuable climatic conditions. For some years past patients suffering from chest affections have been sent to Egypt for the winter; and in the belief that the writer's observations on Egypt as a health resort, made both as an invalid and a medical man during three years' residence in that country, may be of service to the profession, he ventures to jot them down briefly.

As to the means of reaching Egypt, there are differences of opinion as to the long or short-sea routes.

#### *By Long Sea.*

(1.) Liverpool to Alexandria, by Moss line; duration of voyage, 14 days; cost £15.

(2.) London to Port Said or Suez, by P. and O. s.s.; 14 days; £22 to Suez.

(3.) London to Port Said or Suez, by British India; 14 days; £20 to Suez.

#### *By Short Sea.*

(1.) Rail to Venice, thence P. and O. steamer to Alexandria; 6 days. Fare viâ Dieppe, £19 18s.; viâ Calais, £21 os. 6d.

(2.) Rail to Brindisi, thence P. and O. steamer to Alexandria; 3 days. Fare viâ Dieppe, £22 14s.; viâ Calais £24 1s.

(3.) Rail to Marseilles, thence by Messageries Maritimes to Alexandria; 7 days. Fare viâ Dieppe, £20 18s.; viâ Calais, £22 5s.

(4.) Rail to Trieste, thence Austrian Lloyd steamer to Alexandria; 5 days. Fare viâ Dieppe, £21 13s.; viâ Calais, £22 14s.

There can be no doubt of the superiority of the long sea routes over the others, on the score of comfort to the invalid, benefit to his health, and cheapness, provided he is not a very bad sailor, and his medical attendant knows of no peculiarity which would prohibit such a journey. By this route, he avoids all the changes and discomforts of short stoppages, viz., draughts, damp beds, and bad drains. The advantages of the P. and O. and British India lines over the Moss Co. are, that a Doctor and Stewardess are carried, and the voyage is rather shorter: they also both start from London. A disadvantage is that the invalid is carried to Port Said or Suez, which necessitates a very unpleasant railway journey of six hours' duration, a great part of which lies through the desert, and may be either very cold or excessively hot and dusty. The Moss line goes straight to Alexandria. On all lines, the feeding is sufficiently good.

On the comparative merits of the short sea routes there is little to be said. The Brindisi route is only mentioned to be condemned for the invalid, on account of the long and fatiguing railway journey; he should certainly go on board the P. and O. steamer at Venice. The prices of the different routes do not vary very much; but that *viâ* Marseilles, has the merit of presenting both a sea and land journey of medium length. The table on all the boats is very fair.

### *Season for arriving in Egypt.*

The arrival should not be earlier than the middle of October, and it is highly desirable that it should not be later than the end of November. In the event of the invalid intending to go up the Nile by steamer to Luxor, it is very important that he should not start later than the beginning of December. The reason of this is that, in the first half of December one is nearly sure of a delightful summer trip without any cold winds. If the journey is postponed later, very often the north wind, which on land is pleasant, is found on the river to be piercingly cold, and requiring the use of thick top-coats and rugs. It is still more important if the invalid travels in a dahabeeah, that he should leave Cairo in the beginning or middle of November, or he may be caught in the cold weather, which will be found excessively trying.

### *Means of Communication in Egypt.*

The railway joins Cairo and Alexandria; a journey of six hours by ordinary train—of which there are three daily, and four hours by the express.

Between Cairo and Suez, there is one train daily, and the journey occupies nearly eight hours.

Between Alexandria and Suez, there is one train daily, the journey occupying ten hours.

### *Upper Egypt.*

From Boulac Dacrou, a station about  $3\frac{1}{2}$  miles out of Cairo, to Assiout, there is one train daily, accomplishing a journey of 250 miles in a little over ten hours.

Further South than Assiout the traveller cannot get by railway.

Under the present administration the trains keep very good time, and it is very rare to hear of any breakdown. The carriages are comfortable, and adapted for travelling in the East. The administrators of the railway have always shown their willingness to facilitate the travelling of invalids, in the way of allowing reserved carriages on application. At all the principal stations, English is spoken.

In making the journey from Alexandria to Cairo, the invalid, if the case is one for whom chills and changes of temperature are injurious, should choose the morning train which leaves at 8 a.m., arriving at Cairo at 2 p.m. There is a stoppage of a quarter of an hour, half-way, at Kafr-zayat, where there is a buffet.

The mid-day train exposes the invalid to great heat at the commencement of the journey, and corresponding cold at the end ; and at the time of his arrival in Egypt, in the writer's opinion it is highly undesirable for him to travel at night. On his return journey from Cairo, if the weather is very warm, it may be advisable for him to travel by the evening express train, which leaves at 6, and arrives at 10.40 p.m.

The journey from Suez to Cairo is a very fatiguing one for invalids. This is due, not only to the length, but to the fact that a good half of it lies in the desert ; and if the day is hot, both dust and heat make it most oppressive, while, should it be cold, the wind will be found most searching. It is possible to break the journey at Ismailia, where an hotel will be found. At Zagazig, about 52 miles from Cairo, there is a stoppage for twenty minutes, giving time for luncheon and change of trains. Should the journey be attempted, a good stock of water should be carried in the porous jars (goolehs) of the country, and some light refreshments, in the way of cold beef tea, cold fowl, &c.

In the writer's opinion, it would be far better to stop at Port Said, and take the next steamer to Alexandria—a



day's voyage, and then come on to Cairo. The Suez-Cairo train is met at Ismailia by a steam launch carrying the mails, which leaves Port Said at midnight, returning daily from Ismailia at 5 p.m. ; but this is merely mentioned for the sake of completeness. No invalid should think of travelling by it.

It is very seldom that it will be necessary to make the journey from Suez to Alexandria: the same observations apply to it as to that from Suez to Cairo.

The journey from Cairo to Assiout will only be made by invalids in the event of their wishing to shorten or cheapen the journey to Luxor by joining the postal steamers at Assiout. The journey is a very fatiguing one of over ten hours. The train starts at 8 a.m., from a station about three-and-half miles out of Cairo, which necessitates very early rising: it is also requisite to carry all the water and provisions needed on the journey, as there are no buffets on the way. There has recently been an hotel opened at Assiout for the accommodation of travellers. There is a short line of railway between Cairo and Helouan: a train runs to and fro eight times daily.

In former days three choices were presented to travellers on their arrival in Egypt, viz., residence at Cairo or Helouan, or voyage up the Nile in a dahabeeah, or, if he were pressed for time, in a steamer under the care of Messrs. Cook & Son. We will proceed to consider these *seriatim*.

1st.—Residence at Cairo for the Winter.—In former days, when no medical attendance could be obtained at any given point on the Nile, it was certainly undesirable for any invalids to venture on a Nile voyage; and

While in remaining at Cairo the invalid secures a climate probably superior to that of any European health resort, he labours under the following disadvantages:—In the first place, he is inhabiting an Eastern city, in which the dry system was formerly in vogue, and into which the wet system has been introduced without any adequate provision for its removal. Secondly: the hotels have no sufficient provision for fires, the want of which is now at any rate frequently felt in Cairo, whatever may have been the case in former days before the opening of the Suez Canal or the increase in irrigation. Thirdly: The absence of any suitable walk or ride is another disadvantage for the invalid, for, if he is not tolerably robust, he is compelled to take fresh air, either sitting in the garden or on the terrace of the hotel, or else in the Esbekieh Garden, which is very unsuitable, in consequence of the constant irrigation which saturates the surrounding air with moisture.



Residence at Helouan, fifteen miles higher up the Nile than Cairo, and two or three miles from the banks of the river in the desert, where there are sulphur baths, is too cold for invalids during the winter, unless in a private house, as the hotel is only arranged for warm weather, and is built with the bedrooms opening on a gallery running round a garden in the centre, with staircases to descend to the lower rooms, exposed to the outer air.

The third subject for consideration is the voyage up the Nile in a dahabeeah. This presents advantages over the residence at Cairo or Helouan. It is of great importance in this case that the voyage should be made as rapidly as possible, in order that the invalid may arrive quickly at Philæ. Unfortunately, if the wind happens to be contrary, this voyage may take twenty-three days, or even longer, before reaching Luxor. During the greater part of the time the weather may be found piercingly cold, necessitating the use of warm winter clothing. The nights also are exceedingly cold, for the thin planking or plates of of the dahabeeah, having absorbed but little heat during the day, have little to give off at night, so that the invalid has only his own combustion to maintain the warmth of his state room ; so that it soon reaches the temperature of the external air, which often nearly approaches freezing point at Thebes, and probably does actually reach that point lower down the river. In addition to this, it is impossible to give the invalid sufficient cubic space, so that the greater part of the night is passed in an impure atmosphere which undoes much of the good obtained by spending the day in the open air. When, however, the dahabeeah arrives at the island of Philæ, a halt should be made ; and here the invalid will reap all the advantages to be obtained from a dry, warm climate, sheltered from the piercing dust-laden Egyptian winds by the mountains, which here nearly approach the Nile. Little will be gained by ascending to the second cataract, as the winds are very strong and penetrating, the formation of the country affording little protection from them, and the nights are excessively cold, with rapid changes of temperature—for instance, between midnight and 8.30 a.m. a fall of as much as ten degrees has been noticed in the cabin of a dahabeeah.

Within the last few years another course has been open to the invalid, as an hotel was opened at Luxor towards the end of December, 1877. The town of Luxor has been long well known to travellers, who have visited the Nile in search of either health or pleasure, and have been in the habit of making it their headquarters from which to visit

the ruins of Karnak on one side of the river, and Thebes on the other. Here it was that Lady Duff Gordon passed several seasons, and wrote many of her interesting letters. Here also stood the obelisk which now graces the Place de la Concorde in Paris. Along the river front stands the ancient temple, which is almost hidden from view by the houses which have been built into and amongst its ruins. Nearly all the houses are built of mud-bricks, with a foundation of either stone or burnt brick. Some few are whitewashed, but the greater part are uniform in colour with the soil upon which they stand. The native population of Luxor is estimated at between two and three thousand, a large number of whom are Copts, though the Muslims are said to outnumber them. Every nation except the Greek is represented by a consular agent, whose duty it is to arrange disputes between travellers and their dragomans, when they occur, or similar small affairs. At present the resident Europeans are two or three Greeks, who, with the enterprise peculiar to the present race, have opened stores, where tinned provisions of all kinds, and all sorts of odds and ends can be procured, together with wines and spirits, which are consumed very freely by the Copts, and often by the Muslims. In addition to these there is a photographer, and the agent of an English firm in Alexandria. The Post Office faces the river, but the telegraph station is on the Thebes side of the Nile. The streets are very narrow—just wide enough to allow two donkeys to pass. The Bazaar or Sook is very small and poor, and scarcely anything of interest to the traveller can be obtained in it. On Tuesdays a grand market is held in an open space in the town, and from early in the morning till about four in the afternoon presents a very busy scene. After spreading a mat or shawl on the ground the shopman squats down and undoes his bundle of goods. Some hundreds of such shopmen are to be seen ranged in parallel rows forming little streets. Some are grocers or tobacconists, and some sell the produce of the soil; but the greater number are drapers, and deal in materials of various qualities for the most part bearing the English stamp. In one corner sheep, oxen, and camels may be seen for sale. Perhaps the most profitable of the local industries is the manufacture of “antiques,” and of earrings and brooches, with copies of hieroglyphic writing upon them. There are, of course, native craftsmen, such as the weaver, tailor, smith, etc.

The hotel is a large square building, standing in the centre of a large garden, and distant about 350 yards from

the bank of the Nile. It faces nearly due west; is substantially built with very thick walls, which are extremely important in this climate. The great value of a thick wall lies in this, that during the day, if the windows are closed, they keep out the heat of the sun, and hence are of great service during the summer. In the winter, the windows being open all day, the room is supplied with warm air, and their being closed before sunset keeps in this warm air, while the thick walls radiate the heat they have absorbed during the day—both inwards and outwards, the result being that there is scarcely any change between the day and night temperature if the windows are managed properly. A reference to table B will show what a great difference exists between the minima of the external air, and that of the bedroom. Again, should the heat happen to be unusual during the day, a cool and comfortable room can always be found by reason of thick walls. For instance at three o'clock in the afternoon of March 19th, when the thermometer in the shade out of doors stood at  $103^{\circ}$ , that in the Salon was only  $73^{\circ}$ , the room feeling quite fresh and comfortable.

At first the hotel afforded sleeping-rooms for twenty-five persons, afterwards about fifty new rooms were added: these have been most carefully planned, and so placed as to secure the greatest amount of sunlight.

### *Sanitary Arrangements.*

The water for drinking is taken directly from the Nile above the usual watering-place of the town, which is rendered filthy by the dirt thrown over from dahab-beahs and steamers. The water is then filtered through a "zeir," a large porous jar, which, straining off all the thick Abyssinian mud, yields a clear water, long famed for its purity and excellence.

Water closets and cesspools find no place in the hotel: the water system is certainly not the right one for Egypt. Moule's earth closets are in use there, and the writer cannot speak too highly of them,

First, as to the departure for, and the duration of the residence at Luxor. The invalid should take his departure from Cairo about the middle or end of November. The writer cannot, from personal experience, fix the period at which it would be desirable to leave for Luxor; but it certainly should not be later than the end of November, and probably ought to be earlier. If we refer to the last letters of Lady Duff Gordon we find from the dates of some of them that during the four seasons, 1856

to 1868 she always left Cairo a little before the end of November; and in one year, 1866, she says in a letter dated October 25th, "I have got all ready, and we shall sail on October 27th." Lady Duff Gordon had already had considerable experience of the climate of Egypt, and her casual observations on the climate and its effects accord very closely with the writer's.

The next question that one would ask is, how long should the invalid remain at Luxor? This, again, the writer cannot answer with certainty; but as a rule the departure from Luxor should not take place before the end of March or middle of April; but if hearsay may be trusted there are years of exceptional heat, when the departure will have to be made earlier. Invalids, however, should not fly away on the first appearance of great heat, but should wait at least a week to see if it is likely to continue; moreover, it is this very heat which makes the pulmonary invalid feel much better, though it is certainly trying to elderly and healthy people. In reference to this question, one may again turn to the last letters of Lady Duff Gordon for information. During the seasons ending in the years '66, '67, and '68, in the first-mentioned she left in May, in the second between May 23rd and 30th; and in the last between April 28th, and the middle of May, judging therefore from her extensive experience, one would say that the end of April is probably the right time for leaving Luxor.

What clothing should invalids provide for their stay in Egypt?

For underclothing a sufficient number of flannel shirts and drawers and thin merino vests to wear under flannel shirts. Should any occasion arise requiring a white shirt, the invalid should be provided with thick lambswool vests, to wear under the white shirt instead of the flannel. Socks or stockings should be thick and woollen. A large cashmere handkerchief to wear round the waist outside the shirt and inside the trousers is very important, and should be put on as soon as the country is entered. The surface of the abdomen, as we all know, perspires very freely, and this serves to absorb the perspiration, and prevents its turning into a cold water bath when the wearer enters a cool room or rests, at the same time it protects the renal region, and so prevents the danger of nephritis. Cloth clothing may be the same as in England. The invalid should have two tweed suits for ordinary wear—these should be of light colour but warm; a good ulster, a rug, and a light overcoat, which should be worn in the morning



till the air has become warm, and whenever the invalid enters one of the ancient tombs or temples. The Oxford shoe, with a good broad sole and the flat army regulation heel is the best covering for the feet, as if sand gets in it is removed, and the sand shaken out, and it is light and cool. All the above articles are best obtained at home ; also sun umbrellas are to be bought lighter and cheaper in England. Head gear is best got here ; and the traveller, before starting up the Nile, can provide himself with a pith hat. The above remarks refer to male attire ; but from them ladies will gather what is necessary for them to provide, viz., flannel next the skin, and warm clothing generally ; let them avoid black dresses as they pick up and hold the dust, and are difficult to keep clean. Gauze veils are cheaper and better in England, and any colour but green is preferable ; wash leather gloves for donkey-riding cannot be bought in Cairo. During the night the invalid should be clad in a flannel shirt and sleeping drawers.

*Hours to be kept.* During the months of November, December, January, February, March, and April, and till the middle of May, it is of vital importance that the invalid strictly attends to the following rules, viz., not to venture out before 10 a.m., and to retire to the house one hour before sunset. Any infringement of this rule in the case of the poitrinaire is sure to be followed by an increase in the cough and expectoration. During the winter months the night air is cold, and the nights in Egypt are not safe for the poitrinaire until the minimum thermometer ceases to register less than 60°. During November, December, January, and February, the invalid ought to be out of doors at 10 a.m., and indoors at 4 or 4.30 p.m. ; and the whole of this time should be spent in the open air, except during a sand storm, when, if very bad, it may be necessary to keep in the house.

Walking is not much in favour in Egypt, partly because of the heat : but mainly on account of the dusty and bad roads. If the invalid can walk for a couple of hours without fatigue, he will probably find that a visit to Karnak will not overtax his powers, the walk to the temple taking about half-an-hour from the hotel. If walking is too fatiguing, donkeys may be made use of : this is a very comfortable means of progression, for as a rule they have an easy motion ; but as every donkey boy, directly he gets a fare, is anxious to urge on his beast with blows, pricks, and secret pinchings of the tail, which makes the poor animal start and screw with pain, he should be warned on

mounting, that any such conduct will result in his "bak-sheesh" being stopped. There are a few horses which can be hired for riding, and in this way expeditions may be made to the desert, and many of the surrounding villages.

When an excursion of considerable distance has to be made, viz., to the temples or tombs on the opposite side of the river, the invalid, if riding is forbidden, can travel very comfortably in a chair or hammock carried by men.

As to out-door amusements, the stay at Luxor affords a great opportunity of studying the history and manners of the most ancient people in the world, in addition to the charms of its climate. Under the guardianship of his donkey boy, the invalid, with his companions, rides to one of the temples, taking with them their lunch and books, and there they may spend the day imbibing knowledge in the easiest of all ways, *i.e.*, with the object of inquiry under their eyes. There are also subjects to be found in all directions for filling a sketch-book with pleasant remembrances. Fishing is another amusement well suited for invalids, and one also by means of which a good deal of valuable information might be obtained, as little or nothing is known of the immense variety of fish which abound in the Nile. For those who are more robust and fond of sport, there are a good many wild-fowl: and if anything of ornithologists, they will find a number of beautiful birds. In March and February, if there have been a good Nile the previous year, an abundance of quail can be obtained.

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## THE CLIMATE OF LUXOR.

Towards the end of December, 1877, an hotel was opened at Luxor, Upper Egypt, under the auspices of Messrs. Thomas & Cook Son. This gave the writer, who was obliged to seek a milder region, an opportunity of studying regularly the climate of Upper Egypt. The main features presented by Nileland, to the eye of the traveller from Cairo to Thebes, are the broad river with its bits of verdure on either side; and beyond this, a chain of mountains, the Libyan on the West, and the Arabian on the East, the whole forming the Valley of the Nile. This valley presents, from time to time, great changes in width; the mountains at some points, as at Aboolfeda, approaching the river, and running into it with cliff-like steepness. At other points, as at Abydos and Thebes, the mountains diverge from one another, leaving an extensive plain between them. The mountains on either side are of lime-

stone. Luxor is a small town situated in latitude  $25^{\circ} 40'$  N., longitude  $32^{\circ} 35'$  E. It lies on the right bank of the Nile, and is  $291\cdot4^*$  feet above the level of the sea. Immediately opposite Luxor, and lying at a much lower level, is the great plain of Thebes.

The instruments with which the readings were taken were supplied by Messrs. Negretti and Zambra, and all had been compared with standard instruments at Kew. The instruments consisted of maximum and minimum thermometers, psychrometer, or (wet and dry bulb thermometers), and a Fortin's standard mercurial barometer. The

|      |                              | Mean of<br>Maxima. | Mean of<br>Minima. | Maximum. | Minimum. | Mean of<br>Minima in<br>Bedroom. |   |
|------|------------------------------|--------------------|--------------------|----------|----------|----------------------------------|---|
| 1878 | { Last 14 days,<br>December. | 74·4               | 43·3               | 80       | 36       | 65·3                             | } Sent to<br><i>Times</i> ,<br>Dec.<br>29/79. |
| 1879 | { 6th to 27th<br>December.   | 78·0               | 48·6               | 88       | 36·9     |                                  |   |
| 1878 | { January ...                | 68·6               | 41·3               | 83       | 36       |                                  |   |
|      | { February...                | 74·76              | 42·46              | 86       | 38       |                                  |   |
|      | { March ...                  | 80·22              | 47·67              | 110      | 38       |                                  |   |

standard maximum thermometer met with an accident on January 11th, but was replaced by a smaller one, also of Negretti and Zambra's construction. Up to the 31st of January, the thermometers were hung in a north verandah, on a frame about two feet distant from a wall, and the same from the ground: on and after the above-mentioned date the thermometers were hung on a stand raised about four feet above the ground. This stand was open at the bottom, had a double roof, and was closed in at the sides with jalousies, similar to the outside blinds used to keep the sun off: so that while a free circulation of air about the instruments was permitted, the influence of the direct heat of the sun was avoided. In the immediate vicinity of the stand there were neither walls nor trees. The readings were taken daily at 9 a.m. and 3 p.m. During the month of January, the readings were taken from the 5th to the 31st, extending over a period of twenty-seven days. During the whole of February, extending over a period of twenty-eight days. During the last-mentioned month three sets of readings were partially or entirely missed, owing to ill-health. During the month of March the observations extended over a period of twenty days, from the 1st to the 20th inclusive, and on four occasions the readings were partially or entirely omitted.

\* Calculated from observations made with an Hypsometer, kindly lent to the writer by General Purdy, late of the Egyptian General Staff.



The writer has to thank Messrs. Mackinnon and Blackwood, who were staying in the hotel, for taking the readings when he was confined to his bed: but for the kindness of the first mentioned, there would have been a gap of nearly a week in the readings. The following table gives the results of readings during the period that has been mentioned; the accompanying weather diagrams give the details, and serve to assist the reader in forming his idea of the climate of Luxor.

TABLE A.

*Results of Meteorological Observations at Luxor, Upper Egypt, 1878.*

|    |   | January. | February. | March. |
|----|---|----------|-----------|--------|
| 1  | Mean Height of Barometer, corrected }<br>for Temperature ... .. } | 29'820   | 29'855    | 29'743 |
| 2  | Mean Temperature in Shade ... ..                                  | 56'73    | 62'6      | 66'95  |
| 3  | Mean Daylight Temperature ... ..                                  | 61'34    | 66'42     | 77'2   |
| 4  | Maximum ... ..  | 83       | 86        | 110    |
| 5  | Minimum ... ..  | 36       | 38        | 38     |
| 6  | Mean Maximum ... ..   | 68'6     | 74'76     | 80'22  |
| 7  | Mean Minimum ... ..   | 41'3     | 42'46     | 47'67  |
| 8  | Mean daily range ... ..   | 23'7     | 31'7      | 38'45  |
| 9  | Greatest do. ... ..   | 29       | 44        | 47     |
| 10 | Least do. ... ..  | 15       | 20        | 30'5   |
| 11 | Range of Max. from one day to next Mean                           | 3'19     | 4'7       | 3'8    |
| 12 | Ditto do. do. Greatest  | 14       | 19        | 8      |
| 13 | Ditto do. do. Least   | 0'0      | 0'0       | 0'5    |
| 14 | Mean Temperature of Bedroom ... ..                                | 64'2     | 66'4      | 77'66  |
| 15 | Mean degree of Humidity ... ..                                    | 53'22    | 51'06     | 45'02  |
| 16 | Greatest do. do. ... ..   | 74       | 60        | 60     |
| 17 | Least do. do. ... ..  | 33       | 27        | 21     |
| 18 | Number of Days on which Rain fell ... ..                          | 1        | 1         | 0      |
| 19 | Mean Force of Wind ... ..   | 0'94     | 0'8       | 0'42   |
| 20 | Greatest do. do. ... ..   | 4'0      | 3'0       | 2'0    |
| 21 | Least do. do. ... ..  | 0'0      | 0'0       | 0'0    |
| 22 | Number of Dust-Storms ... ..                                      | ?        | 5         | 3      |
| 23 | Mean Amount of Cloud ... ..                                       | 2'98     | 1'96      | 2'1    |
| 24 | Greatest do. do. ... ..   | 10'0     | 10'0      | 10'0   |
| 25 | Least do. do. ... ..  | 0'0      | 0'0       | 0'0    |
| 26 | Mean Degree of Ozone ... ..                                       | 4'17     | 4'34      | 2'98   |
| 27 | Greatest do. do. ... ..   | 7'0      | 8'0       | 6'0    |
| 28 | Least do. do. ... ..  | 1'0      | 1'0       | 0'0    |

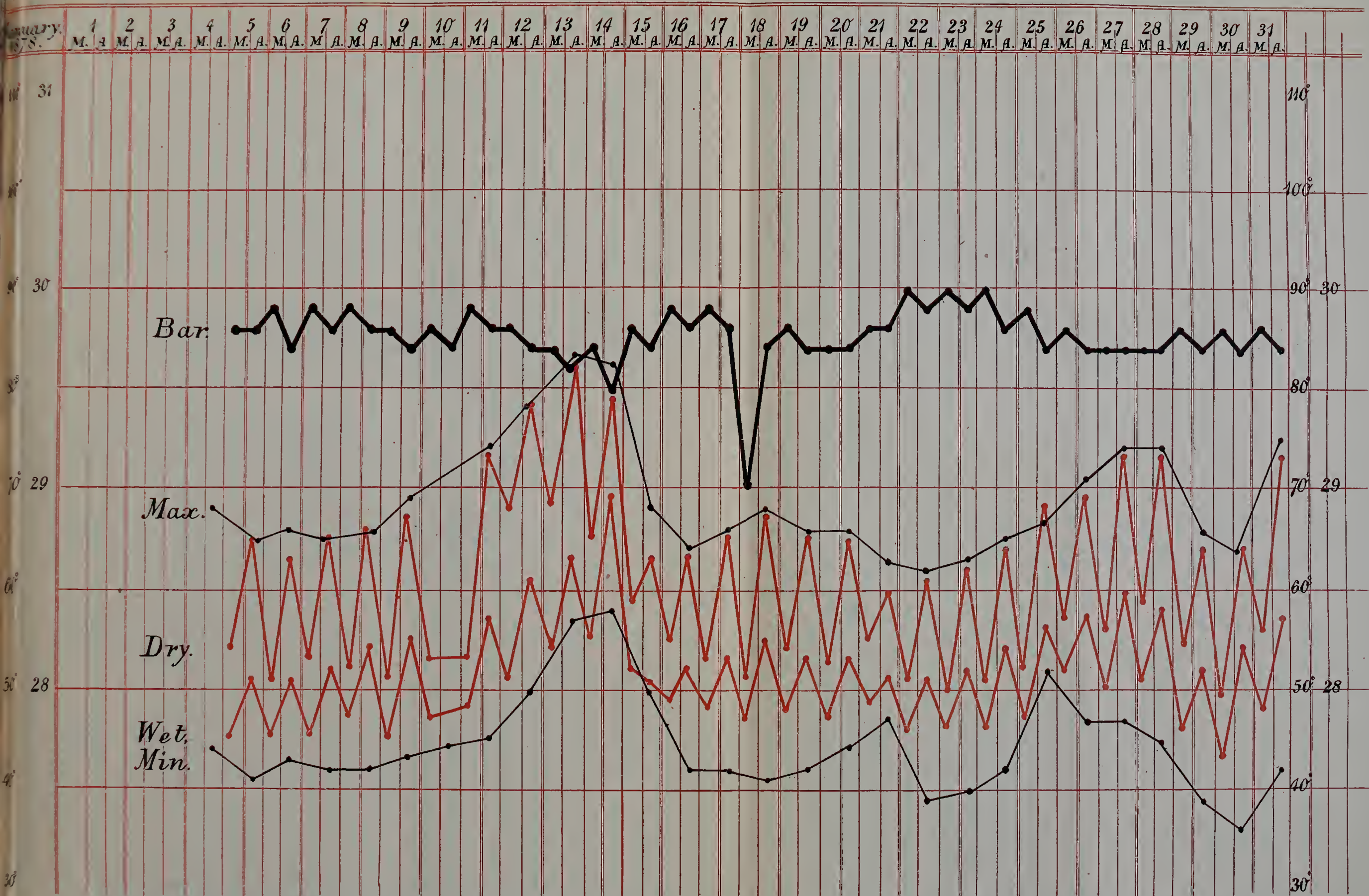
The correction for temperature has been applied to the Barometer.

The Thermometers have had their respective corrections applied.

The amount of ozone present was estimated in the usual way, viz., by noting the depth of the staining produced in a piece of paper prepared with iodide of potassium and starch after the paper had been exposed to the air in a double-metallic gauzé cage. Let us now pass in review the various data afforded by the above table and diagrams.

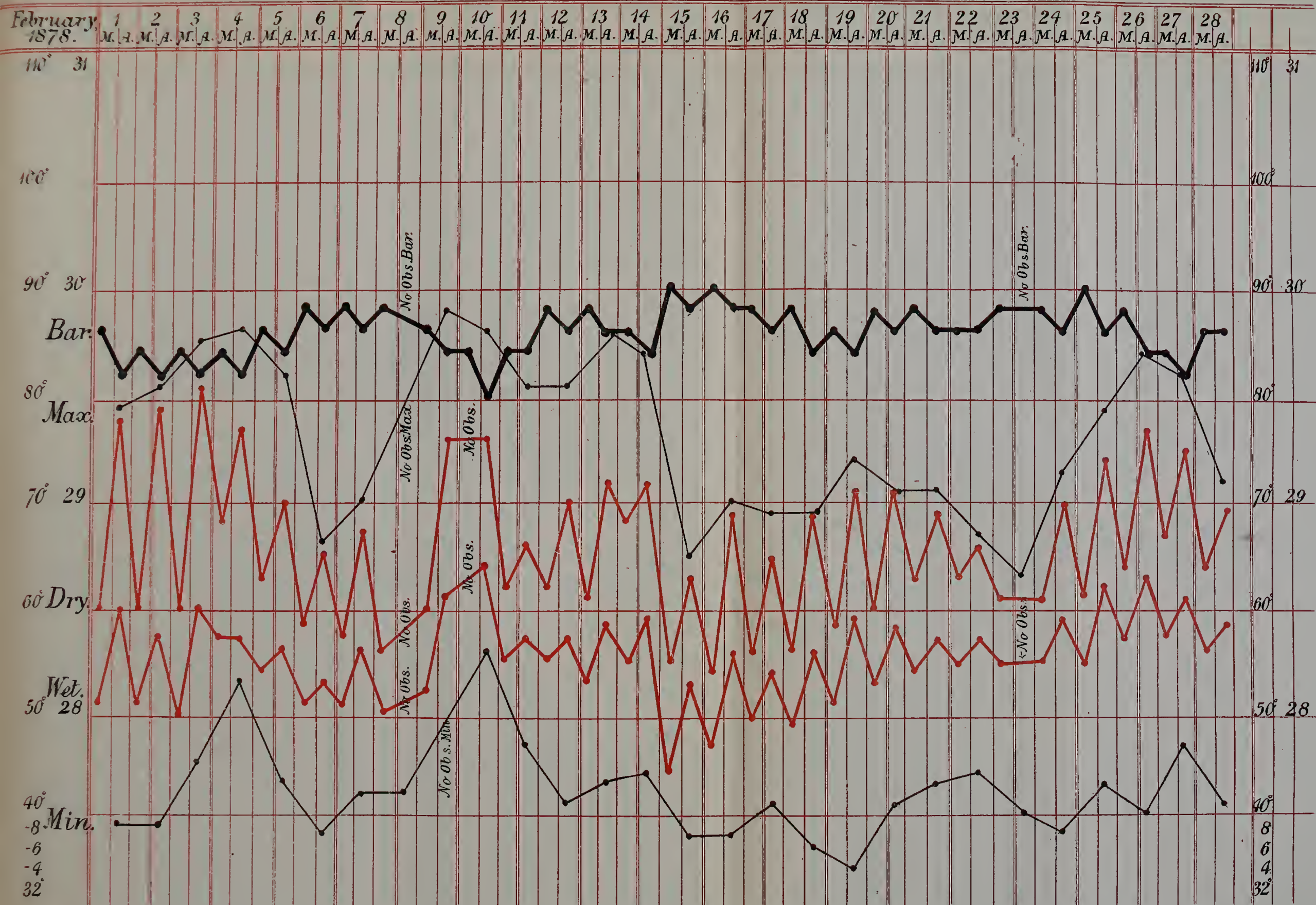
1st.—The mean height of the barometer (the correction for temperature has been applied). This varied

WEATHER DIAGRAM at LUXOR, UPPER EGYPT, for January, 1878.



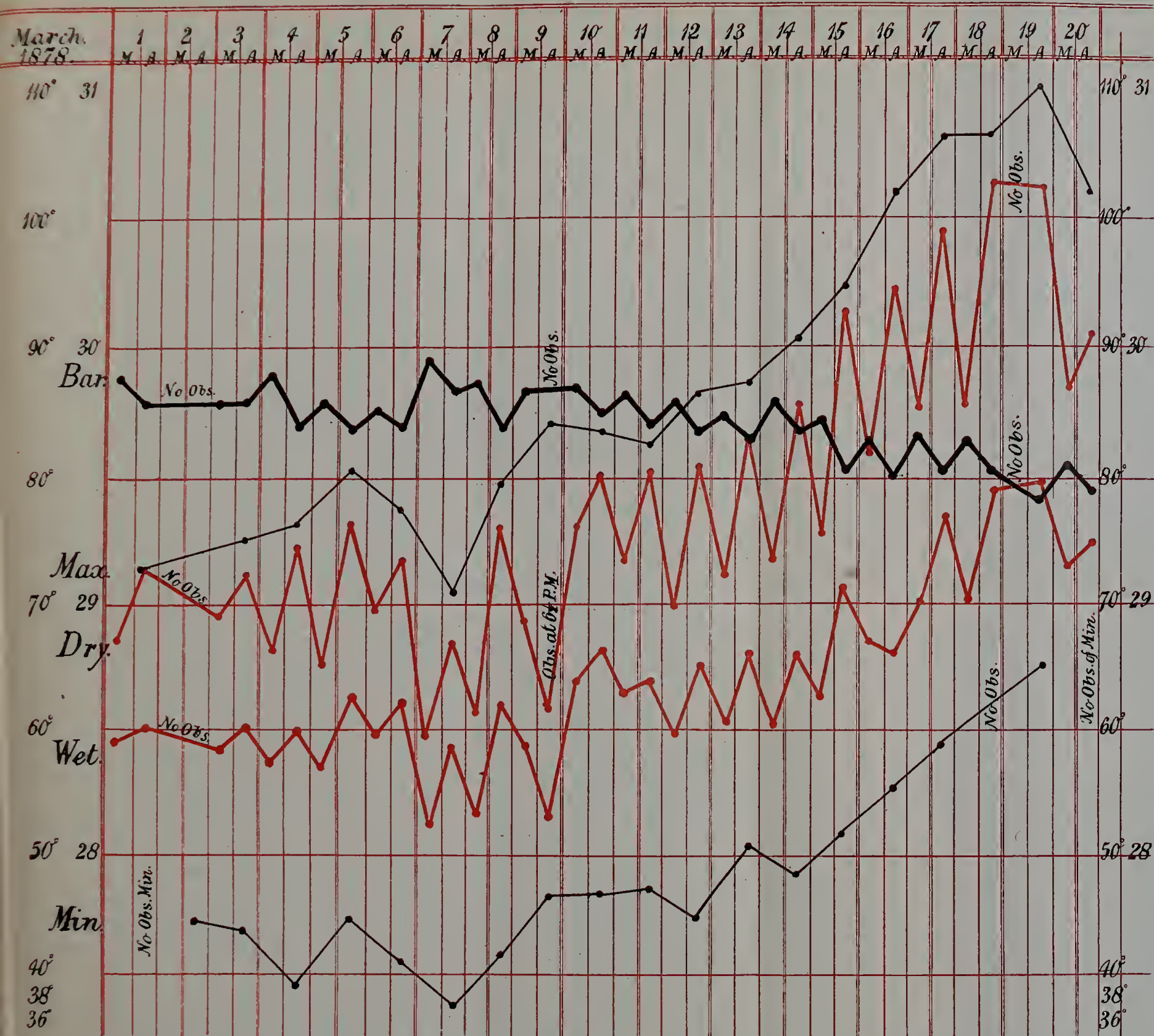


# WEATHER DIAGRAM at LUXOR, UPPER EGYPT, for February, 1878.





WEATHER DIAGRAM at LUXOR, UPPER EGYPT, for March, 1878.





potassium and starch after the paper had been exposed to the air in a double-metallic gauzé cage. Let us now pass in review the various data afforded by the above table and diagrams.

1st.—The mean height of the barometer (the correction for temperature has been applied). This varied

during the three months from  $29^{\circ} 8'$  to  $29^{\circ} 7'$  inches, the level mean being during the month of March, when the temperature began to increase. The course formed by the barometrical observations shows that the variations of pressure are very slight, and serves to remind one that the elevation of Luxor above the sea level is very little. On the 18th of January, however, the barometer reading was  $0^{\circ} 8'$  lower than that taken at 3 p.m. on the preceding day, this unusual fall was not accompanied by any noticeable change.

2nd.—The mean temperature in the shade for the month of January was  $56^{\circ} 73'$ : this is a low temperature for this country, though it would not be felt as cold in England where the evaporation from the surface of the body is not so rapid as it is here. This low mean temperature is brought about by the low temperatures which obtain at night. If we take as the mean temperature of the day, the mean of the readings taken at 9 a.m. and 3 p.m., the mean temperature of the air during that portion of the day suitable for the out-door life of the invalid is found to be  $61^{\circ} 34'$  for this month. In future, this mean will be spoken of as the mean daylight temperature. For the month of February the mean temperature was  $62^{\circ} 6'$ , showing an increase of  $5^{\circ} 87'$  over the mean of the preceding month. This increase was mainly due to the increase of the daily maximum, and in a slight degree to the increase of the daily minimum. The mean daylight temperature during this month was  $66^{\circ} 42'$ , showing an increase of  $5^{\circ} 08'$  over the corresponding mean for the previous month. In the month of March, the mean temperature rose to  $66^{\circ} 95'$ , an increase of  $4^{\circ} 35'$  over the mean of the preceding month. This was due in nearly equal proportions to the increase of temperature of both day and night. On the 19th of March the shade maximum registered  $110^{\circ}$ . The writer was informed by the residents of Luxor that the hot weather which then prevailed for a few days was quite exceptional. The mean temperature for the whole of the month of March would probably have been much lower, as during the voyage down the Nile the weather was cold, as was also the case for some time after the writer's arrival in Cairo.

3rd.—The daily range of the thermometer was always very great, and is such as would be expected in an inland country in the latitude of Luxor. During the month of January the mean daily range amounted to  $23^{\circ} 7'$ , during February to  $31^{\circ} 7'$ , and during March to  $38^{\circ} 45'$ . These great ranges are mainly brought about by the

low temperatures which obtain at night in consequence of the rapid radiation of heat which obtains under a cloudless sky. If now we look at the figures representing the mean range of the maximum thermometer from one day to another, we find that for the month of January the mean variation from one day to another is only  $3^{\circ} 19'$ , for February  $4^{\circ} 7'$ , and for March  $3^{\circ} 8'$  : the greatest and least ranges being represented in the three respective months by the figures 14 and 0, 19 and 0, 8 and 05. From these figures we learn that during that portion of the twenty-four hours available for the invalid the climate is remarkably equal.

4th.—The mean temperature of the bedroom is the next point of importance which has to be noticed. During January this was  $64^{\circ} 2'$ , during February  $66^{\circ} 4'$ , during March  $77^{\circ} 66''$ .

This remarkable uniformity of the bedroom temperature struck several of the residents in the hotel besides myself. The following is the natural explanation of this result: the walls, it must be known, are very thick, and built of crude bricks; these, while absorbing a great deal of heat during the day, keep the heat out of the room, but at night when radiation commences they must part with their excess of heat before the air of the bedroom can approach that of the external air. It will be observed by the reader that during the month of March the mean temperature of the bedroom made a great jump to  $77^{\circ} 66'$ : this was in consequence of the writer's not understanding at the time the way to manage the hot weather in this country. During the daytime the doors and windows were left open, and in consequence, the heated air found its way into the room, and so raised its temperature above that at which it might have been kept.

TABLE B.

*Comparison of Bedroom and Shade Minimum.*

| 1878<br>March. | Bedroom<br>Minimum. | Shade<br>Minimum. | Difference. | 1878<br>March. | Bedroom<br>Minimum. | Shade<br>Minimum. | Difference. |
|----------------|---------------------|-------------------|-------------|----------------|---------------------|-------------------|-------------|
| 5              | 66°0                | 39°5              | 26°5        | 13             | 68°0                | 45°0              | 23°0        |
| 6              | 65°0                | 45°5              | 19°5        | 14             | 68°0                | 51°0              | 17°0        |
| 7              | 65°0                | 41°0              | 24°0        | 15             | 69°0                | 49°0              | 20°0        |
| 8              | 63°0                | 38°0              | 25°0        | 16             | 71°0                | 52°0              | 19°0        |
| 9              | 63°5                | 42°0              | 21°5        | 17             | 73°0                | 55°5              | 17°5        |
| 10             | 65°0                | 47°0              | 18°0        | 18             | 75°0                | 59°0              | 16°0        |
| 11             | 65°0                | 47°0              | 18°0        | 20             | 78°0                | 65°5              | 12°5        |

It is worth while to record here the result of comparing the minima of the twenty-four hours in the bedroom and in



the shade: the observations extended over a period of fourteen days, and shewed that the average difference between the two minima was  $19^{\circ} 8'$ , *i.e.*, the lowest temperature in the bedroom was  $19^{\circ} 8'$  higher than the lowest temperature in the shade. The greatest difference was  $26^{\circ} 5'$ , when the minimum in the bedroom was  $66^{\circ}$ , while the shade minimum was  $39^{\circ} 5'$ . The least difference between the two minima was  $12^{\circ} 5'$ , when the bedroom minimum was  $78^{\circ}$ , while that in the shade recorded  $65^{\circ} 5'$ . It is important to notice that an increase in the difference between the two minima appears to depend on the presence of a low-shade minimum. (See Table B).

5th.—We now come to the examination of the degree of relative humidity of the climate of Luxor. The climate of Egypt has long been celebrated for its dryness; but I believe few, if any, Psychrometric observations have been published. In this dryness of the climate of Upper Egypt we have one, probably the most important of its therapeutic qualities. The number 100 represents the atmosphere saturated with moisture. The mean degree of relative humidity during the month of January was  $53^{\circ} 22'$ , and the extremes were  $74^{\circ}$  and  $33^{\circ}$ . In the following month this dryness increased, and the degree of relative humidity is represented by the number  $51^{\circ} 06'$  for the mean, and  $67^{\circ}$  and  $27^{\circ}$  for the extremes. In March we find a still further increase in the dryness of the air, the mean being represented by  $45^{\circ} 02'$ , and the extremes by 60 and 21 respectively. These figures speak for themselves.

6th.—The number of days upon which rain fell during the three months' stay at Luxor was two, *viz.*, one day in each of the first two months of the year: on these occasions the rain fell in large drops which were very far apart. Neither shower lasted more than five minutes; and after the shower the soil had a dimpled appearance, as if it had been watered very lightly with a rose in which the holes were separated by a much larger distance than usual. In unfrequented parts this dimpling of the sand persisted for many days after, giving an appearance to the desert perfectly characteristic of a previous fall of rain.

7th.—The prevailing wind during January and February was from the North, or North-North-West. In the morning before 10 a.m. the wind generally blew from the North-North-East; but at 10 a.m. it generally began to blow steadily from the North, or North-North-West. In March the wind was occasionally from the South, as on the 19th, when the maximum thermometer stood at  $110^{\circ}$ , and the wind was from the South-South-West.

8th.—The mean force of the Wind.—The force of the wind was estimated, and recorded by the numbers 0 to 12, and occasionally these were checked by observations made with Robinson's Anemometer. During the month of January the mean force was '94; the greatest and least forces are represented by the numbers 4'0, and 0'0. During February the mean force was 0'8, and the extremes 3'0 and 0'0 respectively. In March the minimum for the three months was reached, and is represented by the figures 0'42, 2'0, and 0'0 respectively.

9th.—The number of Dust-storms.—By a dust-storm the writer means a moderate breeze, carrying with it a great deal of dust. The presence of these dust-storms is one of the consequences of the intensely dry climate, and may arise wherever there is a large surface of land devoid of vegetation or irrigation; beyond this, so far as the writer at present knows, there is nothing special about a dust-storm. In January the writer kept no record of the number; in February five are recorded; and in March three: note is taken of these storms, as the invalid must, while they last, adopt certain precautions, which are given in the earlier pages of this book.

10th.—The amount of Cloud.—The numbers given express the proportion of sky covered, 0 representing a cloudless sky, and 10 a sky quite overcast: during January the mean amount is represented by the figures 2'98: on four occasions the sky was noticed completely overcast, and as cloudless on thirteen. In February the mean amount of cloud is represented by the number 1'96: on one occasion an overcast sky was noted, and on twenty-six a cloudless sky. In March the mean amount of cloud was greater than in February, and is represented by the figures 2'1; an overcast sky was noted on three, and a cloudless sky on seventeen occasions.

11th.—The amount of Ozone.—In January, the mean degree of ozone is represented by the number 4'17, the greatest amount by 7'1, the least by 1', the figure 10 being taken to represent the presence of the largest possible amount of ozone. In February the mean degree of ozone attained its maximum, viz., 4'34, and the extremes are represented by the figures 8 and 1: it is worth noticing, in connection with this maximum of ozone, that during this month the mean height of the barometer was greater than in either of the two other months. In March the mean degree of ozone was less than in either of the two preceding months, and the extremes are represented by the figures 6 and 0. The reader will notice, in connection with this, that

the mean height of the barometer was also less. The amount of ozone present in the atmosphere appears to have been related partly to the pressure of the atmosphere and partly to the temperature, viz.,—on a hot day, with a low barometer, only a small quantity of ozone was indicated, while, when the barometer stood high, and the temperature was not great, the largest amounts of ozone were present. The probability is, that the rise in temperature is what accounts for the diminution in the amount of ozone present; for, with a rise of temperature, a given weight of gas would occupy a larger volume; and, consequently, to produce the same amount of discoloration in the test-paper, a larger quantity must pass over it in the same time. For the same reason, “the rarefaction of the atmosphere by the heat,” the mean of the barometric pressure suffers a diminution.

12th.—Electrical Disturbances.—No observations were taken of the electrical state of the atmosphere; but the above heading is introduced for the sake of recording the absence of thunder and lightning.

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## A FEW HINTS FOR TRAVELLERS.

Travellers have frequently told the writer what difficulty they have had in understanding the coinage of Cairo, and how much they have been cheated, owing principally to the shops pricing their goods in the current or “small” piastre and the Post-Office, railway, and all government transactions being carried on in piastres tariff, or big piastres, the first-mentioned being half the value of the latter, 7-20 current or 3-30 piastres tariff going to a franc. The smallest silver coin is a half-current piastre, called “ashereen.” There are three or four different kinds of five-franc pieces, called “reals” or “salaries,” belonging to various countries, which, while if paid as francs, are their full value, differ in the number of piastres they can be changed for. If an Arab lend you a “real,” and you return it to him in single francs, he will consider himself aggrieved, as the “real” is worth a current piastre more than five single francs.

Up the Nile the natives object to any piastres that have holes in them, or look much worn; it is, therefore, as well to take a few pounds’-worth of new ones for any purchases. Copper coins, of which seven or eight of the largest go to a piastre tariff, are useful to give away as bakseech, or to make small bargains in “antiques.” When the Arabs talk

of a gineh, they mean £1, and not a guinea. The writer has known of a mistake arising from an English person making an agreement as to so many guineas, and a Syrian understanding the word to mean pounds.

The weights in use for meat, vegetables, fruits, groceries, &c., are the oke and the rottle; the oke is  $2\frac{3}{4}$  lbs., and the rottle a little more than 1 lb. English. Stuffs are sold by the drah, pic (25 inches) or metre; the yard is unknown. The meat is very good, and cheaper than in England. Vegetables are about the same price, and, with one or two exceptions (such as seakale and Brussels sprouts), like those you have in England. The market is well supplied with fruit. A good deal of wild-fowl is sold there as well during the winter; and, till the berseem or clover crop is over, good fresh native butter, made from cows' milk, is also to be obtained while the animals eat green food. Kishteh, a kind of thin Devonshire cream, and made in the same way, is good in the cool weather. Flocks of goats are driven into the city, and milked before the purchasers' door; most families, however, are supplied daily by milkmen with cows' milk; buffaloes' milk is not used so much, but is thicker and richer than that of the cow. Fish is brought from Alexandria and Suez, and is very cheap and fresh: there is only one kind of fish in the Nile that is thought good the rest are flabby and tasteless; the natives eat them, and there is a market for their sale. The shops are very good, and most things can be bought nearly as cheaply as at home. In the European shops, which price their goods in francs, it is better to pay in French money, as they expect eight current piastres to the franc, and so you lose in giving piastres. In bargaining with natives in the bazaars and elsewhere, it should always be remembered that the shopman will ask a good deal more than he means to take, and you should never give what he asks; the European shops have their fixed prices. Hair-dressing or cutting for ladies is expensive, as the shops are only intended for gentlemen: the least charge the hair-dresser makes for attending at the house is five francs each person. The shops are mostly shut from twelve to three, and on Fridays the bazaars are very empty of salesmen. Sales of second-hand clothing, &c., take place in the Khan Khaleel every Monday and Thursday, and the crowds of people make it unpleasant to pass through on those days. Washing is a costly item for travellers, as the hotels charge 3/6 a dozen. Residents have theirs done at home, there being rooms fitted for washing on the roofs of most of the houses. There are a few furnished and unfurnished apartments to



be had ; but if the traveller understands neither the language nor ways of the Arabs, it will be found far less troublesome and expensive to remain at one of the hotels, where they will generally board him at a reduced rate for the winter season. There are one or two French pensions. Servants' wages vary from £3 to £5 a month without food, and they like to take a small percentage in marketing for you.

Carriages are 2/- an hour in the town, but for a drive beyond the town limits they demand five francs or more on Fridays, Sundays, and fête days, exorbitant prices are asked. Donkeys are the most popular and cheapest mode of locomotion, being half-a-franc an hour, taken in the street, and a franc from the hotel stands—ladies' side-saddles, half-a-franc extra ; but the native saddles are very comfortable, if you do not wish to go fast, the donkey-boys, as a rule, are civil and obliging, and speak a little French or English. The Esbekieh Gardens are free to the public in the mornings, but in the afternoons the band plays, and a small charge is made for entrance. They are well planted, and, thanks to plentiful watering, the grass is beautifully green. A very popular amusement in the winter is to drive or ride out to the rubbish-heaps near old Cairo, with your luncheon, and hunt for curiosities ; and you are generally rewarded by finding antiques, in the shape of beads, coins, and bits of pottery, &c., without much trouble, as they lie on the surface. In Nubia, if delayed by a bad wind, there are some fine pebbles to be found along the river banks, particularly at Aboo—Simbel and Dakkeh agates, onyxes, &c., which cut and polish very well, and form a pleasing remembrance of a Nile trip, in the shape of necklace or bracelet.

